

# **Composting Records Requirements**

# General Record Keeping Requirements

## Title 14, §17869

- Log of special occurrences
- Public complaints
- Quantity and type of materials received and produced
- Number of load checks performed and rejected
- Test results
  - metal concentrations,
  - fecal coliform and Salmonella sp. densities,
  - temperature measurements
  - dates of windrow turnings.
  - pathogen reduction methods
- Serious injuries to the public
- Training
- Records kept for five years

# **Title 14, §17869(b)**

## **Special Occurrences Log**

- special occurrences encountered during operation
- methods used to resolve problems arising from these events
- including details of all incidents that required implementing emergency procedures

# **Title 14, §17869(c)**

## **Public Complaints**

- 1) The nature of the complaint,
- 2) The date the complaint was received,
- 3) If available, the name, address, and telephone number of the person or persons making the complaint, and
- 4) Any actions taken to respond to the complaint.

# **Title 14, §17869(d)**

## **Quantity and Type of Materials Received and Produced**

### **Feedstock Received**

- **Quantity**
- **Type**

**Agricultural operations shall maintain records  
only for compostable material accepted from  
off-site**

# **Title 14, §17869(d)**

## **Quantity and Type of Materials Received and Produced**

### **Material Produced**

- **Quantity**

**This includes chipped and ground material and  
compost**

# **Title 14, §17869(e)**

## **Load Checking**

- Record of load checks performed and loads rejected

# **Title 14, §17869(f)**

## **Test Results**

Records of test results generated by compliance with Chapter 3.1. Composting Operations Regulatory Requirements, Article 7

- metal concentrations,
- fecal coliform and Salmonella sp. densities,
- temperature measurements
- dates of windrow turnings.
- pathogen reduction methods

# **Title 14, §17869(g)**

## **Serious Injury Record**

- “Serious injury to the public occurring on-site and any complaint of adverse health effects to the public attributed to operations.”
- “Serious injury means any injury that requires inpatient hospitalization for a period in excess of 24 hours or in which a member of the public suffers a loss of any member of the body or suffers any degree of permanent disfigurement.”

# **Title 14, §17869(h)**

## **Training Records**

The training record should reflect that all personnel assigned to the operation are trained in subjects pertinent to operations and maintenance, including:

- physical contaminants
- hazardous materials recognition and screening,
- odor impact management
- emergency procedures

# **Title 14, Chapter 3.1 Article 7. Environmental Health Standards**

- §17868.1 Sampling Requirements
- §17868.2 Maximum Metal Concentrations
- §17868.3 Pathogen Reduction
- §17868.5 Green Material Processing Requirements

**ODOR IMPACT  
MINIMIZATION PLAN  
Title 14, §17863.4**

# Odor

A smell or scent becomes an odor when someone finds that smell disagreeable.

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, § 17863.4(a)**

- “All compostable material handling operations and facilities to prepare, implement and maintain a site-specific odor impact minimization plan.”
- “A complete plan shall be submitted to the EA with the EA Notification or permit application.”

# ODOR IMPACT MINIMIZATION PLAN

## Title 14, §17863.4(b)

Odor impact minimization plans shall provide guidance to on-site operation personnel by describing, at a minimum, the following items:

- odor monitoring protocol
- description of meteorological conditions
- complaint response protocol
- design considerations
- operating procedures

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(b)(1)**

- Odor monitoring protocol
  - describes the proximity of possible odor receptors and
  - a method for assessing odor impacts at the locations of the possible odor receptors;



Are there people around the operation that are capable of smelling an odor?

# Odor Receptors

When trying to identify receptors consider:

- Proximity, odors can diffuse and stick
- Meteorology, convection and inversion move odors
- Topography, odors can roll down hill
- Land use history, public use responds to odors
- Contributing odor sources



- What are the operator's procedures, monitoring stations etc, to access routine and incidents of operational odors?

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(b)(2)**

- “Description of meteorological conditions
  - effecting migration of odors and/or transport of odor-causing material off-site. Seasonal variations that effect wind velocity and direction shall also be described”

# ODOR IMPACT MINIMIZATION PLAN

## Title 14, §17863.4(b)(3)

- Complaint response protocol
  - Should include the following elements
    - the nature of the complaint,
    - the date the complaint was received,
    - if available, the name, address, and telephone number of the person or persons making the complaint, and
    - any actions taken to respond to the complaint.



The complaint protocol could also include:

- timelines for reporting to the EA
- Weather conditions
- Determining the odor source, type, and strength
- Changes in operations causing odor or complaint
- Changes in operations as result of complaint
- Community outreach

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(b)**

### **Design Considerations**

Description of design considerations and/or projected ranges of optimal operation to be employed in minimizing odor, including:

- method and degree of aeration
- moisture content of materials
- feedstock characteristics
- airborne emission production
- process water distribution

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(b)**

### **Design Considerations – cont'd**

- pad and site drainage and permeability
- equipment reliability
- personnel training
- weather event impacts
- utility service interruptions
- site specific concerns

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(b) Operating Procedures**

Description of operating procedures for minimizing odor,

- aeration,
- moisture management,
- feedstock quality,
- drainage controls,
- pad maintenance,
- wastewater pond controls,
- storage practices (e.g., storage time and pile geometry),
- contingency plans (i.e., equipment, water, power, and personnel),
- biofiltration,
- tarping.



Are there waste materials received by the operation that are inherently odorous?



The operation should have a strategy to deal with odorous materials that arrive on site . Even the rejection of materials may cause an odor event.



- The operator should have methods to control the type and amount of materials received on site, such as
- Off-site pre-treatment of materials
  - Odor-screening and load-checking procedures
  - Written load-rejection policy with front gate notice signage
  - Contacts and agreements with material providers



Odors may be generated during normal operations, does the operator have methods to address incidents of odors? Continuous operational odors may be difficult to detect.

# Odor Minimization

Identification of odors and adjustments in operations require a coordinated response which may include:

- Written procedures for odor-based , on and off site operational adjustments in material receipt, processing and handling.
- Designated off-site odor assessment sites
- Community/neighborhood odor event feedback
- relationship with the EA for notification of odor events and operational adjustments
- Odor complaint response policy, procedure and records
- Compostable material removal criteria and off-site agreements.



Are there seasonal events that tend to generate periodic odor events? The operators should anticipate circumstances that lead to odors migrating off-site. Contingencies for rains and winds are necessary for a site to continue operations.

# Seasonal Preparations

Preparations may include:

- Seasonal moisture adjustments
- Feedstock and product accumulation adjustments
- Scheduled pre-season grading and site preparation
- On-site meteorological equipment, such as wind socks and rain gauges
- Written procedures for forecasted weather events, including operational adjustments in material receipt, processing and handling.

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(b)**

### **No Odor Reducing Procedures**

**“If the operator will not be implementing any of these procedures, the plan shall explain why it is not necessary.”**

# **ODOR IMPACT MINIMIZATION PLAN**

## **Title 14, §17863.4(c) & (d)**

### **Revisions & Reviews**

- c) “The odor impact minimization plan shall be revised to reflect any changes, and a copy shall be provided to the EA, within 30 days of those changes.”
- d) “The odor impact minimization plans shall be reviewed annually by the operator to determine if any revisions are necessary.”

# **Odor Impact Minimization Plan**

## **§ 17863.4(e)**

### **Enforcement**

- e) “The odor impact minimization plan shall be used by the EA to determine whether or not the operation or facility is following the procedures established by the operator. If the EA determines that the odor impact minimization plan is not being followed, the EA may issue a Notice and Order (pursuant to § 18304) to require the operator to either comply with the odor impact minimization plan or to revise it.”

# **Odor Impact Minimization Plan**

## **§ 17863.4(f)**

### **Enforcement**

- e) “If the odor impact minimization plan is being followed, but the odor impacts are still occurring, the EA may issue a Notice and Order (pursuant to § 18304) requiring the operator to take additional reasonable and feasible measures to minimize odors.”

# Small Group Exercise